ABSTRACT

[0108] A speech recognition system for transforming an acoustic signal into a stream of phonetic estimates includes a frequency analyzer for generating a short-time frequency representation of the acoustic signal. A novelty processor separates background components of the representation from region of interest components of the representation. The output of the novelty processor includes the region of interest components of the representation according to the novelty parameters. An attention processor produces a gating signal as a function of the novelty output according to attention parameters. A coincidence processor produces information regarding co-occurrences between samples of the novelty output over time and frequency. The coincidence processor selectively gates the coincidence output as a function of the gating signal according to one or more coincidence parameters. A vector pattern recognizer and a probability processor receives the gated coincidence output and produces a phonetic estimate stream representative of acoustic signal.